Applicant : Fatiha Anouar et al.
Serial No. : 10/519,032
Filed : August 9, 2005
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Attorney's Docket No.: 08774-
0269US1 / MEG0880/J00025358US

Amendments to the Drawings:

The attached replacement sheets of drawings includes changes to FIGS. 1-3 and replace the original sheets including FIGS. 1-3, which have been amended to include readily identifiable descriptors for the blocks.

Attachments following last page of this Amendment:

Replacement Sheets (2 pages)

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REMARKS

Claims 1, 7, 9, 20-21, 24, 28 and 33 are canceled.

Claims 34-38 are added.

Claims 2-6, 8, 10-19, 22-23, 25-27, 29-32 and 34-38 are pending for further examination.

Drawings

The Examiner objected to the drawings because FIGS. 1-3 do not include readily identifiable descriptors for the blocks. FIGS. 1-3 have been amended to include such descriptors. Accordingly, applicant requests withdrawal of the objections to the drawings.

Rejections under 35 U.S.C. §101

The claims were rejected as failing to fall within one of the statutory categories of invention under section 101. The claims have been amended to clarify the subject matter of the invention. For example, claim 2 recites a method of testing a currency item in a currency testing apparatus and recites that the method is performed by the currency testing apparatus. Therefore, claim 2 is tied to another statutory category (*i.e.*, a particular apparatus). Claim 25 has been rewritten in independent form and recites a currency tester that includes sensors and a processor coupled to the sensors and arranged in a particular way. In view of the amendments, applicant respectfully requests withdrawal of the rejections under section 101.

Rejections under 35 U.S.C. §112, par. 2

Claim 2 has been amended to clarify the issues raised by the Examiner under section 112, par. 2. For example, the amendments clarify that the language regarding the increase in the resolution in the spatial domain and the decrease in resolution in the spectral domain modifies the phrase "processing the measurements to derive values in at least two different resolutions." Also, in claim 2, the phrase "measured values" has been changed to "measurements," and the phrase "the set of spectral components" has been changed to "the signal's spectral components."

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In view of these amendments, applicant respectfully requests withdrawal of the rejections under section 112, par. 2.

Other claims also have been amended for clarification.

Rejections under 35 U.S.C. §103(a)

In the Office action, claims 2-5, 8, 13, 20-21, 23 and 33 were rejected as unpatentable over U.S. Patent No. 6,438,262 (Bernardini) in view of U.S. Patent No. 6,899,215 (Baudat). The remaining claims were rejected as unpatentable over the combination of these references and one or more of U.S. Patent No. 6,459,806 (Raterman), U.S. Patent Publication No. 2003/0035565 (Rhoads) and the Wolberg article.

The method of claim 2 includes processing measurements of a currency item to derive values in at least two different resolutions: (i) the resolution is increased in the spatial domain, and (ii) the resolution is reduced in the spectral domain. Support for these features can be found, for example, at page 12, lines 14-22 of the Specification.

In some implementation, the claimed subject matter can allow a more accurate representation of a currency item to be derived with less data so that testing of the currency item (for example, for determination of authenticity and also classification – type of currency item, denomination) and to be carried out with less processing, as well as greater efficiency and speed at lower cost. The claimed subject matter also provides flexibility in the resulting feature vector depending on the reduced resolution obtained by taking a subset of the spectral components.

Bernardini discloses a banknote validator that includes sensor pairs (*i.e.*, LEDs 10 and photodiodes 12-15). Outputs of the photodiodes are amplified and fed to a microprocessor 16, which has a built-in A/D converter for converting the input signals into digital signals to be processed (col. 5, lines 28-34). Each LED 10 can be provided with a lens or collimating slit and the photodiodes 12-15 can be provided with similar optical means "to ensure the sensing of a beam of a desired resolution" (col. 5, lines 64-67). Bernardini further discloses as follows:

Since the windows to be detected may have a width for example of 4 millimetres, it is preferred that the beams <u>sensed</u> are correspondingly narrow to produce the desired resolution. In cases where the validator 32 is intended for use with banknotes having windows of different dimensions, the dimensions of the beams <u>sensed</u> should also correspond to give sufficient resolution. The LEDs 10 and/or chotodiodes [sic] 12-15 may also be provided with filters to ensure <u>sensing</u> at a predetermined wavelength or wavelengths.

(Col. 5, line 67 – col. 6, line 9) (emphasis added) Thus, it is clear that according to Bernardini the lenses, slits and filters are positioned to change the resolution of the optical beams *prior* to any sensing of the beams and, therefore, *prior* to measurements of the beams. Such *pre-processing* of the optical beams is very different from processing *previously derived measurements* of a currency item to derive values at different resolutions, as recited in claim 2.

Bernaradini further discloses that the processor 16 performs various analyses of the sensed signals (*see, e.g.*, col. 6, line 37- col. 7, line 6), but says nothing about processing the sensed signals to derive values at different resolutions.

Although Baudat discloses the use of feature vectors, it fails to disclose or render obvious the subject matter missing from Bernardini. Furthermore, the remaining references disclose only techniques for increasing the resolution, but do not disclose techniques for decreasing the resolution. In particular, none of the references, taken alone or in combination, discloses or renders obvious deriving values at a higher resolution so as to recognize the currency item <u>and</u> deriving values at a lower resolution to denominate the currency item.

At least for the foregoing reasons, claim 2 and its dependent claims should be allowable. Claim 25 and its dependent claims should be allowable for similar reasons.

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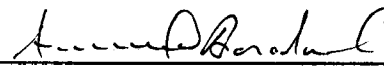Attorney's Docket No.: 08774-
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Conclusion

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

The fee for the Petition for Extension of Time is being paid electronically via the EFS system. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: ___9/17/09___

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